SCHOOL-YARD GAMES. BRONX BOROUGH, NEW YORK CITY.

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# THE REORGANIZED SCHOOL PLAYGROUND

By

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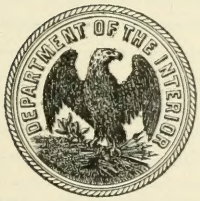
(REVISED EDITION)





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# THE REORGANIZED SCHOOL PLAYGROUND.

"Fifty dollars fine for anyone found trespassing on this yard after school hours." The foregoing sign was on the side of a school building in a middle-sized city of southern Arkansas, but the sign is not unique in that locality, and it represents an attitude of mind that has been very nearly universal. The school yard has been one of the least utilized of our educational resources. Surfaced with a view to his convenience and used mostly in accordance with his desires, it has practically belonged to the janitor. I do not know that there are any cases where he has used it to raise potatoes and the family vegetables, but he might nearly as well have done so for any advantage that has come to the school or the children. Often the pupils have not been allowed to come to school until 15 or 20 minutes before 9 and have been required to leave the yard immediately after dismissal. The gates, if there were any, have been closed and locked during the summer time. Under the circumstances there is little wonder that school yards have been generally inadequate in size and often atrocious in condition.

In the past 10 years the play movement has burst upon us and has brought with it an illumination as to the educational value of play. The old-time school yard, with its limited space and its restrictive traditions, is entirely unsuited to the new uses demanded by the new ideals, and there is going on everywhere a reconstruction of theory and practice to meet the new requirements. As in all reconstruction periods, however, the facilities and needs are out of harmony, though many cities, with an imperfect understanding of the problems involved, are attempting to improve conditions according to their lights.

The new activities for the school require, in the first place, a larger yard; secondly, a yard which is in condition to be used—which is not often the case at present; and, thirdly, a yard with a certain amount of equipment for play and some one in charge. The yard is nearly as important as the classroom in the conduct of the modern school, for it must furnish a place for gardening, for open-air classes, for organized play and physical training both during the school day and after school, on Saturdays, and during the summer vacation. These new uses are creating a new condition, which warrants far greater expenditure and care than the old-time yard ever received.

It is unfortunate that any school needs to be built in the city, because it is usually impossible to get enough land for baseball, football, and the other games that the children should play. The past 10 years, however, have seen the invention or introduction of several new games, such as volley ball, basket ball, indoor baseball, and tether ball, which are more economical of space than any games that we have formerly had and which help to relieve the almost impossible condition of a few years ago. It is possible now on a block of ground, if the block is of fair size and the school is not too large, to have a good deal of play that is worth while.

## SIZE OF THE SCHOOL YARD.

Our schools have had very inadequate yards in the past, and many of the largest city schools are so hemmed in by surrounding buildings that the yards can be enlarged only by buying highly expensive property. Nevertheless, there is a very strong sentiment all over the country for larger grounds, and yards are being enlarged in many cities wherever there is an opportunity to purchase adjoining pieces of land at prices that are not prohibitive. Cities are often paying as much as $10,000 or more per acre for such land. The movement is noticeable also in the country, but much less so. Country communities are very conservative. Grounds can usually be purchased for country schools at the rate of $100 per acre or less, but it is doubtful if 1 per cent of them have playgrounds that are as much as an acre in extent.

It is impossible to set any arbitrary standard for the size of a school ground in the country. It certainly should be large enough for baseball, as it ought not to be necessary to do most of the school play in the neighbors' fields, as is so often the case at present. Very often a neighborhood park and picnic ground should be made at the school also. This should always be done, I am inclined to believe, if the site offers the facilities, and there is no better place in the neighborhood. The minimum size for the ground of a country school should be 2 acres. Nothing less than this will do for baseball, and if the tract is to be used by the older people evenings and Saturdays, as it ought to be, nothing less than 3 acres will be adequate. Ten acres will not be too much for the general athletic field and picnic place for the district. There is no advantage in the large yard, however, unless the yard is kept mowed, so that it can be used. City children need a good-sized school yard because there is no other place to play. Country children need a large yard because at home there is no one to play with, except in the simplest games for little children. The State boards of education in Pennsylvania and Virginia are dealing wisely with this problem by requiring the plans of all build-

ings and grounds to be submitted to the State board for approval and not approving any plans for new schools that do not provide for adequate playgrounds.

A city high school requires at least 10 acres of ground in order to carry on the games that its students should play, because nearly all of these games require a considerable area, and the growing conception is that every student, not a few athletic specialists, should take part. Girls need a separate field from boys and they should have every encouragement in their play. High schools are probably getting two or three times as much ground as they did 10 years ago, but it is practically impossible in most cases to buy 10 acres of ground in the central portion of a well-built-up city for a high-school playground. This problem can be dealt with only in three ways: First, by replacing the space-requiring games such as baseball and football by space-economizing games, such as indoor baseball, volley ball, and basket ball; second, by using the school grounds at different times for different classes all through the school day; or third, by purchasing a good-sized field at some distance from the school. The last is such a poor alternative that it seems scarcely worth considering.

Various standards have been proposed for the city elementary school. The board of education of England requires 30 square feet of playground for each child. This would place a child every 5 feet over the school yard. A year ago the State of Washington passed a bill requiring 100 square feet, but this was vetoed by the governor. Even this would have been inadequate. In a good many of the old schools of New York there is not room enough in the external playground for half of the children to stand in the closest possible order. Where the land on which a school building is erected costs two or three hundred thousand dollars it is not to be expected that much more ground will be secured than the bare needs of light and fire protection demand. But for most of the new schools, in the smaller cities at least, there is at present a workable standard, namely, one block for each school. This is quite generally adopted in the Middle West and the South at present. In the city of Little Rock, Ark., there is not a school for white children in the city that has not a full block to itself. There are not more than one or two schools that have not a full block in Pueblo, Colo. There are 16 school grounds of more than 1 acre in Dallas, Tex., and the last five grounds secured in Houston contain from 3 to 8 acres each. In San Angelo, Tex., every school but one has two blocks at least, and two have about 10 acres of play space. The first school built in Gary, Ind., had 2 acres of playground, the second had 4, the third 11, and a lot recently purchased contains 20 acres.

I think we may well put it down as a minimum requirement in most cities that each school should have one block of ground. It is

believed that new schools will generally adopt such a standard, and sooner or later the yards of many of the older schools will be enlarged to conform to it. Two years ago the city of Houston, Tex., secured a bond issue of $500,000 for enlarging the yards of several of its old schools. The city of Galveston has just voted a bond issue of $100,000 for the same purpose. There are many other cities that should do this at once, and an increasing number of cities may be expected to do so.

The blocks of many cities are 2 acres or less in size, while those in other cities, as in Salt Lake City for instance, may be as much as 10 acres in size. It can be said in general that a block of 2 acres or less puts all play at a disadvantage. The lots are so short that the back yards are very small, and there is no space for the small children to play. Such blocks are scarcely large enough for baseball when they are vacant, and they are not large enough for school playgrounds even when the school has an entire block. Schools vary from the 4-room school to the 30 or 40 room city school. For play purposes the advantage is with the larger school in the matter of supervision, because it is too expensive to furnish supervision to the play at the school with a small number of pupils; but if the school is large and the block is small, there will be an obvious lack of agreement between them. Probably a 10 or 12 room school is about as large as can well be accommodated on the average city block.

It is often difficult, and sometimes impossible, under existing conditions to secure a full block of ground for a school. There are few entire blocks within the city without buildings, but sites should be selected ahead as far as possible, anticipating the city's growth, and no new addition should be allowed to come into the city without setting aside a block for a school. Owners generally ask more than the land is worth for school sites, and it is often difficult for the school board to get enough money to purchase a block. They usually hold that they have no right to condemn land for a playground, and often it can be secured in no other way. In most cases all that school boards really need is a modern interpretation of the school laws. They are usually given the right "to condemn land for school purposes," and the organization of play has become nearly as much a "school purpose" as arithmetic. In some cases it may be necessary to have the school laws changed, but usually that will not be difficult in the light of present interest in play. It surely is possible in most places to get land enough to carry on the activities of a modern school.

In hilly cities school sites are often selected that are very uneven. Such sites are usually cheaper in the beginning, but are nearly always dearer in the end than sites that are nearly level. A rounded hill offers a conspicuous position for a school building. Yet it is much less suitable for the location of a school than a store. No merchant

*A.* AN EVENING RECREATION CENTER, NEW YORK CITY.

*B.* SWINGS PROPERLY ARRANGED, WORCESTER, MASS.

would select such a site, because he knows that his customers will not climb the hill to buy of him. It is just as great an effort to climb a hill to go to school as it is to buy a stick of candy. After you once reach the store it is just as well on the top of the hill as anywhere else. But the hilltop is useless as a school playground when you once get there, as there are very few games that can be played on a hillside. A hillside is much more appropriate for a private house than a school. The house does not require very much space, and not much terracing is required to make the yard nearly level. But for a school the whole block has to be put into one or two terraces, as nearly level as may be. The grading required will probably cost as much as the site, or more. A terrace always tends to gully out and is a source of constant expense. The terraces should be sodded or walled at once or covered with honeysuckle or some such vine. The honeysuckle will add greatly to the beauty of the bank, and it will hold it like a stone wall. The New York, New Haven & Hartford Railroad is covering its cuts through Rhode Island and Connecticut with rambler roses, and it may be that these would be serviceable for school terraces in some localities. If it be found that the school occupies a site that can not be leveled without a prohibitive expense, the site should be given up.

## LOCATION OF THE SCHOOL BUILDING.

When an appropriate piece of land has been secured and leveled off, the next step should be the location of the building upon it. When a city hall or a courthouse is to be built, it has become the custom to place it in the center of a large block, which is treated as a sort of park, after the fashion of the English country residence. This park gives the needed space, so that one can get a view of the building and observe its architectural features. Where the space around the building is used as a park, there is no lost space and no conflict in the two uses. The central location is justified by the fact that this is a city building that all are to see, and its architecture is an asset to the city. When we consider the location of the school building, however, the decisive question should be the purpose to be served. If the school is erected to please the passer-by and to be an ornament to the city, then the architect should be allowed to place it with a view to securing architectural effects, and he will place it in the center of the plot in most cases. The building should be surrounded with grass, and the children should not be allowed to play upon it. If, on the other hand, the school is intended for the education and welfare of the children, the building should not be located in the center of their playground. The architecture of the building has little, if any, effect upon them, while play is the most fundamental thing in child nature. If the building is placed in the center of the ground and the children are allowed to play on all sides of it, the

grass is soon killed off, the surroundings become bare and unattractive, and the location is the worst possible. It may be said, too, of most of the buildings so located that they have few architectural features to exhibit, and a vista only serves to set off their ugliness. But even if all the ground is used, and the grass is not respected, it is impossible in most cases to have play that is vigorous and worth while when the school building is placed in the center of the site, because this usually leaves only a fringe of ground that is not large enough in any place for play. Instead of having the windows on one side to protect from balls and missiles, the windows on all sides have to be protected. If the school ground is to be used, it is better for the architectural effect as well as for purposes of play to locate the building at one end of the block, within 15 or 20 feet of the sidewalk. This space in front of the building can be parked, laid out to flower beds or ornamental shrubbery, protected with a low hedge or a fence covered with vines, and kept intact for architectural effect.[1]

## VINES.

Unless the climate is rainy and cold, it will be an advantage to plant vines over the school building. Vines make the building cooler in the warm parts of the year, and the touch of green that they add is generally welcome. Wisteria will make it a great flower garden in spring. The ivies will furnish a glow of grateful color in the fall. Where a strip of land 3 or 4 feet wide about the building is prepared for vines and flowers, it often adds very greatly to the appearance of the school and to its comfort during the warmer months.

## THE SURFACING OF SCHOOL GROUNDS.

The school yards of many of our cities are a disgrace to the systems to which they belong. I believe that much less than 50 per cent of the yards of the country are in condition to use. Covered with brickbats and piles of ashes, gullied out by the rains, with the roots of trees projecting in places, they furnish an almost impossible surface over which to run. Not more than one-quarter as large as they should be in most cases, the space should be utilized to the fullest extent. But in actual fact not more than 25 per cent of play efficiency can be secured from the yards of many a school system. There is many a school site that has cost $10,000 or more that has received less than $100 afterwards to make it available for the play of the children. The school trustees finish the school building and apparently for-

[1] NOTE.—The author overlooks one of the strongest reasons for locating a school building in the center of its lot, namely, the desirability of removing classrooms as far as possible from the noises and distractions of the street. Practically, all such questions must be determined by balancing the advantages against the disadvantages. The advantages of the location favored by the author are well set forth; the weight of the disadvantages in any particular case will necessarily determine the result.—Editor.

get all about the playground, leaving the dirt taken from the cellar unleveled and the ground full of holes and hummocks. It seems almost incredible that this should be so frequently true as observation shows it to be. Yet even if it does cost $1,000 to grade and surface a $10,000 yard, it surely is not wisdom to throw away the $10,000 for the lack of the one. In many cases all that is needed is to dismiss the school early one afternoon and set the children with rakes and hoes to filling in gullies, raking up cinders and bricks, digging up projecting stones, and cutting off roots. Probably half the school yards of the country could be improved 50 per cent by this simple expedient.

As in the other features, it is easy to see that the interests of play have been disregarded also in surfacing school yards. In the play of men three surfaces have been approved—grass for baseball, football, and games requiring a large space; a sandy loam or sand-covered clay for tennis courts; and cinders for running tracks. Where the school playground has been surfaced at all, it has generally been with brick, cement, gravel, or broken stone. The requirements of the case are a surface that is smooth; that does not get muddy after rains or dusty in dry weather; that is springy beneath the feet and soft to fall upon; that does not get overhot in summer or slippery in winter; that does not wear out the play apparatus and the clothes of the children unduly; and, more than all, that does not wear out their nervous systems from its shocks and bruises. It is not easy to find a surface which meets all these requirements. Probably we shall have to manufacture a surface for the playground as we do for the street before we shall get one that is entirely satisfactory.

*Grass.*—Wherever a school can have grass on the yard and have play at the same time, grass is a good surface for most games, but this is usually possible only in country schools, where there is a large yard and a small number of children. In the South I have seen Bermuda grass that had a good start stand the intensive play of a city school. Perhaps its wider use will be a solution of the problem for the smaller cities of the South, but in most cases play and grass are antagonistic, and the school must choose between them. A school that chooses grass for decorative purposes instead of play might with equal wisdom choose a wall pattern in place of a blackboard for its classrooms.

*Brick.*—Not a few of the school yards in our great cities are surfaced with brick. I imagine that this surfacing must have been chosen by the janitor. It is an admirable yard for his purposes. It does not get muddy after rains or "track" into the school building. It is so hard to run over that the children prefer the street, thus causing the janitor the least possible amount of annoyance. At its best,

brick is hard and unyielding, with shocks upon the nervous system at every step or jump. To fall upon it means a bad bruise on the knee and often a hole through the trousers. Most of the bricked yards that I have known have been more or less uneven, or contained soft bricks, where the water would stand after rains. In frosty weather the brick holds the frost, which makes it a very difficult surface to run or walk over. If the members of any school board now providing brick for school yards would go out and play one game of indoor baseball upon it, they would take it out the next day if possible. No company of men ever has or ever would consent to play on a brick playground. Brick is better adapted to tennis than it is to most of the games that the children play, but I have not heard of any bricked tennis courts furnished by the tennis clubs.

*Cement.*—Cement is better than brick. It is not so slippery or uneven, and it is easier to run over. In very large schools with very small yards, like those of New York City, cement or asphalt may be the only really practical surface now available, but nearly the same objections apply to cement as to brick.

*Gravel and broken stone.*—Both of these surfaces, especially the former, have been much used in surfacing school yards and are generally unsuitable, not so much from the necessity of the case as from the materials selected. Anyone who has attempted to run over a heap of macadam or a surface covered with loose pebbles knows how difficult it is. The loose stones turn the ankle and cause constant slight sprains that weary the runner. To fall upon these sharpened pebbles means a serious bruise. For the children all these conditions are ten times worse, because so many of them go barefoot in the spring and summer, and pebbles mean constant bruises on the feet and toes. A yard of this kind will wear out a pair of shoes in a few weeks; baseballs and volley balls will get ragged with a day's wear. The yard probably destroys enough clothing and apparatus every year to pay for surfacing it properly. There should be no gravel or broken stone on a school yard larger than a small pea or, better, a No. 4 shot. The small, round gravel that is used in the Chicago playgrounds, known as torpedo gravel, makes a fairly satisfactory surface for play. The dust macadam, such as is used for the finest top dressing of drives and tennis courts, also makes a satisfactory surface. The torpedo gravel costs about $1.50 per cubic yard. One yard will cover about 100 square yards of surface. It may be obtained of building contractors. The broken stone will be found to be hard to run over, to wear out clothes and play apparatus rapidly, and to be generally unsuitable for play, but the objection that school boards are apt to make to it is that for some reason it tracks into the schoolhouse. If this macadam is covered with 1 or 2 inches of loam

or sand, it furnishes excellent underdrainage, and the result is a very good play surface.

*Cinders.*—Coarse cinders, such as are often used on school grounds, will use up a baseball in an afternoon. They also cut the shoes and the clothing if a person falls. Cinders that are well ground and rolled and leveled make a satisfactory surface to run over, but not a very comfortable surface to fall upon. They have been used in the past almost altogether in making running tracks. Many of the London board schools and very many of our own city schools are surfaced with cinders. At the best, cinders are hot in summer and unattractive in appearance, though fine cinders make a fairly good surface.

### SATISFACTORY SURFACING.

Thus far our consideration of surfacing has been mainly a matter of elimination. Some surfaces are more unsatisfactory than others, but there is no surface that is wholly satisfactory. Doubtless we shall have to manufacture the surface for our playgrounds in time, much as we do the asphalt for our streets. However, there are now better surfaces than are generally used. Mr. Leland recommends a mixture of clay loam and cinders as satisfactory. On the whole a sandy loam that is well underdrained makes a very satisfactory surface. Almost any sort of a tennis-court surface, but especially sand covered clay or macadam, is a good play surface for a yard with moderate use.

## KEEPING SCHOOL YARDS IN CONDITION.

In the past the school yard has been expected to keep itself in condition. It has been no one's duty to look after it. It may be taken for granted that it will not do this. There are not many enterprises that can be launched and left to run themselves. Every school yard with anything but a grass or brick or cement surface ought to be leveled and rolled down at least once a year. Often this can be done by the children themselves. Most grounds need much more care than this, but an overhauling once a year is an absolutely minimum requirement. Generally the school yard needs to be sprinkled at certain times to keep down the dust. In California it is not unusual to sprinkle with a heavy asphaltum oil and then spread sand on top as in putting Tarvia on a road. In Philadelphia glutrin is used on the school playgrounds. This is a by-product of paper making and is said to be "all of the spruce tree but the fiber," and greatly to improve the surface for play purposes.

Mr. W. D. Champlin says of the use of glutrin in Philadelphia:

> Glutrin is a thick, adhesive liquor, and in color generally appears not unlike molasses. It is very soluble in water and therefore by proper dilution or by the after effect of rain on treated surfaces can be caused to penetrate very

thoroughly and evenly into the ground over which it has been sprinkled. On drying it acts like a powerful adhesive. * * * It will not harm anything that would not be spoiled by plain water.

The cost per gallon? In quantities of less than a carload the material is sold at 15 cents per gallon of 10½ pounds. In carload lots the price is 14 cents. The cost of spreading is approximately 1 cent per square yard.

As a rule, the amount of glutrin required for the first treatment of a playground will vary from 0.5 to 0.6 of a gallon per square yard, and the mixture, as a rule, should be 2 parts of water to 1 part of glutrin. On succeeding treatments the amount of glutrin required will, as a rule, be from 0.2 to 0.3 of a gallon per square yard, and about 3 parts of water to 1 part of glutrin should be used.

For underdrainage the entire plot should be graded to a subgrade of 10 inches. This surface so made is to be carefully, though not accurately, leveled, and is then to be compacted by rolling with a steam roller of not less than 5 tons in weight. All soil or waste material resulting from this grading should be taken away and disposed of. Then spread over this surface sufficient hard-coal cinders so that after rolling with a steam roller of not less than 5 tons in weight there will be a thickness of 5 inches. The cinders must be thoroughly wet before and during rolling. The rolling may be done in one layer. Then place on top of the cinders a sufficient depth of stone screenings so that after wet rolling with a steam roller of not less than 5 tons in weight and bringing the surface to the grades given by the district surveyor, there will be a thickness of not less than 5 inches of stone screenings.

After this surface has been sufficiently and properly rolled the entire surface must be sprinkled with a mixture of glutrin and water until one-half gallon of glutrin has been absorbed by each square yard of the surface, the proportion of mixture to be 2 parts water to 1 part glutrin.

## FENCING.

There is no uniform practice in regard to fencing school yards. In the eastern sections of this country they are generally fenced; in the middle and southern sections they generally are not. There has been a tendency during the past few years to remove fences. The fences around parks and public buildings have generally been taken down. Houses and house lots are usually unfenced. This is one expression of the socialistic tendency of our times. We are moving away from the cloister and its exclusiveness. Undoubtedly the removal of fences from most of the large public parks has been an advantage. There never was any reason for fencing them. The same may be said of the fences in front of houses. The strip of parking and grass is often more attractive than the strip broken by fences, as was formerly the case. It is hard to see that the fence ever served any purpose except exclusiveness, and the question in this regard is naturally one of individual preference. However, the tendency everywhere is toward fencing playgrounds and fencing parks used as playgrounds. Sherman Park, Chicago, which is both a park and a playground and contains 60 acres, is fenced, while Washington and Jackson Parks are not. The fence used is a high

steel picket fence, costing about $1.50 per running foot, and it is there in order that the park may be closed at a certain time at night, and the public kept out after that hour.

There are certain advantages in having the school yard unfenced; the play space is considerably increased, as the ground is used to the sidewalk, and frequently the sidewalk and neighboring street itself become a part of the school playground at recess and noon intermissions. Some school yards even in small cities are so small that there is literally not room for the children upon them. If they were fenced, there not only could be no play on the school premises, but often the children could not be crowded inside. The fence not only limits the size of the school ground to a space several feet inside the sidewalk, but the fence space and the land next to it is also unavailable for play. When a game of ball is going on and the ball is batted outside, it requires a long detour and interferes with the rapidity of the game.

These disadvantages of the fence seem serious, and they are serious for some schools with inadequate yards, but the disadvantages of the unfenced yard are also serious. If the school ground is not fenced, the children use the sidewalk and the street for their playground, but the sidewalk and streets were not intended for this purpose. The school, having failed to make provision for the children on its own premises, is plainly trespassing on the rights of the community. No school board has a right to build a school without providing on the school premises a place for the children. If the grounds that have been secured are not sufficient, they should either be enlarged or abandoned. Street play is becoming increasingly dangerous to children, because of the rapidly increasing number of automobiles. Children who are playing in groups are always heedless, and the child who dashes from the school yard in a game of tag is more likely to run into danger than the child who is really playing in the street. There are occasional mad dogs and runaway horses in the cities. If the children are in a fenced yard they are safe, while there is always danger otherwise. However, the urgent reasons for fencing the modern school yard are much more fundamental. It is becoming the custom to put into school yards a considerable apparatus, and to keep them open as directed playgrounds during the summer. It is difficult to protect the apparatus if the playground is not fenced, and it is still more difficult to protect the neighborhood from annoyance. There is frequent complaint in reference to the use of the school yard as a playground, but the complaint nearly always comes from the use of it by rowdies at night after the play director has gone, for then they are apt to come in and greatly annoy the surrounding residents by their yells and boisterous laughter. If a school ground is fenced, the children can also be prevented from running by dan-

gerous pieces of apparatus where they are likely to be struck. Discipline becomes much easier. The fence also makes of the school yard an institution and helps to create loyalties.

There is also an æsthetic incompleteness about an unfenced yard. It does not seem to have the individuality that it should have. Nature puts the bark about the tree and the skin about the animal to separate it from other things, to mark the boundaries of its individuality. The mind seems to demand that things that are distinct in fact should be distinguished in some way from other things.

In many school yards there is a fence dividing the girls from the boys. It is the practice in municipal playgrounds to have separate playgrounds for boys and girls. The reasons for it are obvious and sufficient; there are often loose girls and always loose boys coming to the playgrounds, and it is better not to have them together, or where they can corrupt other children. The same is true of the school playgrounds. If the school yards are to be unsupervised loafing places, as they have so often been in the past, it is certainly better that the girls and boys should loaf separately; but if the school yard is to be a playground and under supervision, it is probably better not to have a division fence in most cases, because the ground is generally not large enough to be divided and because in case of division there must be two play directors, an expense not always justified by the attendance. It is socially dangerous for older boys and girls to loaf together, but they can usually play together with safety.

School fences thus far have not been very satisfactory, as a rule. Undoubtedly in most cities the school yard has been the most neglected and unsightly place in the whole city. If it has been unfenced, it has generally revealed to the passer-by a stretch of untidy bare ground. If fenced, it has usually been with rough boards, painted on the outside and unpainted on the inside. The steel picket fence is more satisfactory. It is permanent, difficult to climb over, and reasonably good looking. It is, however, very expensive and less beautiful than hedge or wire. I am inclined to think that, except in the extreme northern part of this country, a hedge of evergreen privet is one of the best fences. It is cheap, beautiful, difficult to climb, and gives privacy to play, and shuts off the ugliness of the bare ground within. It is a protection from storms in winter, and its grateful green is always restful. It will have to be planted in good soil and protected by a wire fence in the beginning. The prettiest fence, and also one of the cheapest, that can be put around a school ground is a woven-wire fence covered with flowering vines. The wire should be close enough, at the bottom at least, so that indoor baseballs will not go through. If rambler roses or clematis or honeysuckle be planted over this, it will be a flower garden set on edge during a considerable part of the year, and

*A*. RING GAMES.

*B*. A GAME OF VOLLEY BALL.

*A*. THE GIANT STRIDE.

*B*. OUTDOOR PLAY.

often the prettiest thing in the whole neighborhood. The fence at the Jamestown Exposition was 8 feet high and completely covered with honeysuckle and clematis. The fragrance could be perceived for several rods, and it was admired by all. It grew within a year or two.

## TREES.

If a school ground is to be much used in the late spring and summer, in most parts of this country it must have shade. In some parts this is true for nearly the entire year. Trees also add greatly to the attractiveness, if they are well selected and properly placed; but it is also possible to destroy a school playground by planting in it half a dozen trees in the wrong places. If the first tree is planted on the home plate, the second tree in the pitcher's box, and the third tree on first base, and so on around, it will not take very many trees to spoil the available space in most school yards. A large part of the trees that have been planted thus far should be cut out. I have known a small yard to be ruined by planting three trees. In most grounds all trees within the play space should be eliminated. The playground needs shade, but it also needs space. The trees should be planted around the playground at the edge and not within the ground itself. In larger grounds there may also be trees around special features, such as the baseball diamond or the basket-ball or volley-ball court, or along the walks, or along the running track at the side of the ground, but trees should never be planted at random, without a definite plan for the yard and a definite purpose for the trees.

One row of trees should be set around the school ground just outside the sidewalk, and a second row just inside or just outside the fence, according to the size of the ground and the width of the space between the sidewalk and the fence. The rule of tree experts is that shade trees should be planted from 25 to 40 feet apart. It is a good rule to plant alternately cottonwoods and hard maples, or hard and soft maples. Then the soft maples will grow up rapidly and begin to furnish shade very soon, while the hard maples will come on more slowly. As soon as the hard maples develop enough to give sufficient shade, the cottonwoods or soft maples should be cut out and all the space given to the slower-growing but more beautiful trees. If this method is followed, the trees should be planted from 15 to 20 feet apart, so that they will be 30 or 40 feet apart when the soft trees are cut out. It might be well also to plant a different kind of tree in the inside row from those in the outside row. *Paulonia japonica*, common in New York City, looks like a catalpa with the blossoms of wisteria upon it, and is very attractive. The catalpa

itself is a beautiful tree, both in the spring, when it is in blossom, and in the fall, when it carries its long drooping pods. Some of the streets of Washington that are bordered with horse chestnuts are very beautiful in the spring, when the trees are in blossom. Even our common basswood or linden is fragrant and attractive in April and May. In the South the magnolia can be used effectively, and in California the beautiful pepper trees are very decorative. Any of these trees will make of the school yard a great bouquet in the springtime worth coming a long way to see. It might be well at times to select nut trees instead of flowering trees. The hickory turns a rich yellow in the fall; and hickory, walnut, and butternut furnish good shade. Such trees offer an opportunity for nutting festivals in the fall, though it might be that the temptations the nuts would offer to climbing might not be good for the trees. In Porto Rico they say that they can not have mango trees in the school yards, because the children break them down in climbing for the fruit. The Japanese ginkgo, a tree much used in the streets of Washington, is a beautiful tree, but it is little known outside of Washington.

Very many trees that are planted in school yards die. The most common cause is probably that the trees are not really planted. A tree is often dug or torn up from somewhere, a hole is cut in the school yard, the tree is stuck in, earth is thrown on the roots, and the tree is considered to be ready to grow. It is needless to say that such methods are without result. Trees should be planted late in the fall or early in the spring. If a good many of the roots have been broken, a proportional part of the top should be cut off, for there will not be enough roots to feed a large amount of foliage. A tree can not be planted in the sterile subsoil of a school yard with reasonable expectation that it will live. A space from 4 to 8 feet square and 2 or more feet deep should be excavated and filled in with good, rich earth. The whole should be well packed and watered down, and the tree should be boxed. The estimated cost of planting trees in Washington was $1 a tree. This price was for the planting and boxing alone, as the trees were furnished by the city nursery. This may seem expensive, but it is scarcely 1 per cent of what a well-placed tree is worth to a school yard.

It is a good thing to have benches around a number of the trees, in order that the children may sit in the shade when they are tired or when they are eating their luncheon. Wherever it is possible the games and play should be so planned inside the yard as to keep a grass border 8 or 10 feet wide under the trees and along the fence. This adds greatly to the attractiveness of the yard and serves as a pleasant place to sit or lie in the shade when tired.

## THE NEWER USES OF THE SCHOOL YARD.

Since the school yards of the country are very inadequate, the problem is to get a maximum of use out of a minimum of space, so as to make the small yard meet the needs of the children. One of the rules of efficiency experts is to use the plant as much as possible. There is very little available play space in most of our cities, either for children or for adults. If the school yard is to have its maximum use and efficiency, it should be used from 8 o'clock in the morning until 10 o'clock in the evening all through the pleasant weather, a possible efficiency of about 14 hours a day. As opposed to this, in many school systems the children are not allowed to come to school until just before 9; they are sent home at noon and as soon as school is dismissed for the day, making a minimum efficiency of half an hour to one hour's use each school day, with no use at all on Saturdays or during the vacations. The only school system that I know that is approaching the maximum use is the one at Gary, Ind. In Gary there is a play teacher in the yard or the gymnasium from 8 o'clock until 5 every day and from 7 till 9.30 each evening, thus giving a daily use of the playground for 10½ hours each day for six days a week and all through the year. It is probable that the next 10 years will see the use of all suitable schoolyards quadrupled by use after school, on Saturdays, and through the summer vacation, and by the introduction of play into the curriculum.

## PLAY IN THE CURRICULUM.

If small school yards are to meet the needs of play of large numbers of children, the classes must use the yards at different times. Supt. Wirt has worked out at Gary an admirable system to meet this condition. There are no recesses in Gary, but of the first five grades each has two play periods of 45 minutes in the yard every day. This is under the direction of a regular physical instructor, and it is devoted to organized games. Gary has a 6-hour school day, from 8.45 to 12 and from 1.15 to 4. Of this, 1½ hours are spent in the playground or gymnasium during the first five or six years. After that there is one period of physical training a day until the eleventh grade is reached, but in the remainder of the course there is no physical training or organized play except after school and in the evenings. We have undoubtedly been inverting the natural place of physical training, for in most cases it first makes its appearance in the high school, and for many students it first becomes compulsory after entering college. Yet the first period is the physical period of life. This is the time of the greatest motor restlessness, of the greatest interest in physical achievements. The paramount question for the small child is not arithmetic, but physical health. It is impossible for him to attend

long at a time to any mental task. His exertions need to be broken by frequent periods of play and relaxation. His working hours should naturally be much shorter than those of more mature students. If he is ever to develop into the perfect physical type, he must get most of the training during the time of growth, when his muscles and his whole body are plastic. Intellectual training may well go on to the sixtieth or seventieth year, and spiritual training and growth until death, but physical strength is usually perfected before the twenty-fifth year and often by the twentieth year. All of these arrows point in the same direction, and they all indicate that physical training should be the major subject, if not the paramount subject, in the training of little children, and that the time might well be decreased as the maturity of the body is approached.

### FORMING A HABIT OF PLAY.

One of the best things about the system of physical education in the typical English preparatory and public school is that the students are supposed to get out and play every afternoon, as soon as their lessons are over. These exercises are practically required up to the sixth form in the public school, and by that time the habit has been so well established that the student continues to play during his university course and probably during the rest of his life, from the force of this early custom.

Leisure is increasing all over the world to-day, and with great rapidity in the United States. Every year a number of new States and cities pass the eight-hour law for public work. Every year certain trades secure a reduction in working hours, and the age at which children may go to work is raised in several States; the working hours of women are steadily reduced. In the aggregate this means the gain of millions of hours of leisure to the people of the country every year, and it is becoming important for the school to train for leisure, as well as to train for work. The school must give the boy and girl games that may be played throughout life, and it must establish play habits which will lead to the continuance of play. Supt. Wirt says he has taken the "street and alley time" of the children for organized play. In the old days on the farm the time after school was required for doing chores, but there is no use for this time in the city. The children left to themselves play little. This may seem a very radical statement, but I have gone over cities repeatedly with notebook in hand and watched what the children were doing. I have found nearly 90 per cent of loafing to 10 per cent of play. It is doubtful, if the credits and debits of this time were balanced, that anything on the positive side could be shown resulting from it. To devote these hours at all of our schools to organized play would be almost a pure gain in itself and would also tend to establish a

habit that would be of great value all through life. It would be better for us all, and we should probably accomplish more, if we could spend the hours from 4 or 5 until supper in play every afternoon.

Play is the only available system of physical education in the majority of cases. Our schools are not provided with gymnasiums as a rule, and little children do not usually take kindly to gymnastics. It may be said that it is unnecessary to make any formal provision for play, as we can merely keep them out of school and let them play. The answer is that play of small groups of little children left to themselves runs mostly to the dramatic types. It is not vigorous enough to give physical training. If they are turned out to play in the school yards by themselves, it will be found in general that not more than 10 or 15 per cent of them are playing at any sort of vigorous game. The play must be organized, if it is to secure results. In the preparatory schools of England there is about two and one-half hours of required play immediately after school every day. In Germany there are three periods of required physical training a week in every grade of the elementary school. In all grades a part of this time is devoted to play and in the lower grades nearly all of it is often so devoted. Besides this, many schools have what is known as the compulsory-play afternoon, one afternoon a week. In many of our private schools in the country, such as Groton, Lawrenceville, and St. Pauls, play is required in the fall and spring and gymnastics in the winter. In most of our city school systems we have had the curious anomaly of beginning physical training in the high school and requiring gymnastics indoors, while giving no credit for exercise in the form of play in the yard, which, besides exercise, offers open air, relief and recreation from study, the training of the judgment and the will, and the good fellowship and social adaptation of team games. If there is any justification for gymnastics in the high school, then organized play in the elementary school requires no justification, and the school can afford to furnish the time for it. There are school systems that are now giving to play from one to five periods a week in the lower grades, but in no case, with the possible exception of Gary, is the time sufficient.

## A DIRECTOR OF PHYSICAL TRAINING.

Supt. Wirt manages to get along without a director of physical training for the city by employing experts in each ground. This is possible because Supt. Wirt is himself an expert, but for most cities the absolute prerequisite of a play system that is worth while in connection with the schools is that the city have or employ a competent director of physical training. This person must plan what is to be done, arrange tournaments and contests, teach folk dances, arrange

exhibitions, gala days, and play festivals. As he will deal largely with untrained people, he must also train his teachers. The physical director should have his long vacation in the winter time in most cases and have charge of the playgrounds all through the summer. The position deserves an adequate salary, and a capable man should be secured. If his salary is the same as that of the principal of the high school it will not be far wrong.

### A TEACHER AT EACH GROUND.

There will be no play on the school grounds that is worth while unless there is a teacher or physical director in charge. This teacher should have charge after school until dark; after supper until about 10, if the ground is lighted; on Saturday mornings at least; and all through the summer. Where the ground is kept open at night, it is highly desirable that a special playground teacher be employed, but if the playground is open only after school and on Saturday mornings, regular teachers from the schools may be utilized for the work, receiving from $15 to $25 per month additional for it. During the summer time full time and full pay are, of course, needed.

### LIGHTING THE SCHOOL PLAYGROUND.

It is not the school children alone who need to play. In some ways the problem of the working boys and girls is more acute than that of the school children. Most of the former are engaged in monotonous tasks, and the spirit of youth recoils from them at night, and they go to the dance hall, the saloon, the picture show, or worse places. They must have their recreation at night, because they are working during the day. For two or three hundred dollars, it is possible to light a school playground so that it can be used for basket ball, volley ball, and indoor baseball at night, and also for folk dancing and various forms of athletics. If the school has a swimming pool and gymnasium and auditorium, these will furnish to all the young people nearly the same facilities as the Y. M. C. A. and Y. W. C. A. possess, and will make an attractive center for the young life of each community. More and more such ground should attract business men and their wives to come out after supper and play with their children the games that the playground offers. I recently witnessed a game of soccer between two teams of adults from the evening school, which took place at night on one of the playgrounds of Gary, Ind. Mr. Wirt has shown that the number using the gymnasiums and playgrounds of the Emerson School is nearly equal to the numbers using the 11 gymnasiums and playgrounds of the South Park system of Chicago; and the cost of installation in Gary is about one-twentieth of the cost in Chicago, and the cost of maintenance is about one-sixth as much.

## PLANNING THE SCHOOL GROUND.

Very often not more than half of the possible efficiency of a school playground is secured, because the ground has not been properly planned. If the boys wish to play basket ball, they put up the equipment anywhere that there is room for it, regardless of whether it is the proper place for the game or not. If a basket-ball court is placed in the middle of half an acre of ground, it takes practically the whole space, though it does not need more than a fifth or a sixth of it. Games should be assigned to spaces that they will fit snugly, so that they will not interfere with other games in other spaces. Indoor baseball, volley ball, and basket ball should be provided with permanent locations, as this is the only way in which the maximum efficiency of a school yard can be secured.

*Indoor baseball.*—Every school ground of any size should have at least two indoor baseball diamonds, one for the girls and one for the boys. The regulation diamond is 35 feet square, though the 27-foot diamond is better for small children. This should be laid out permanently, and the places for the bases marked. Bases should be made of sacks filled with sand. The 17-inch ball should be used in the smaller grounds, and the diamond should be so placed that the ball will not be batted over the fence or against the school building.

*Volley ball.*—Volley ball is the best game for school yards in general, because it takes very little space, and nearly all the children can play. It is the natural corrective of nearly all the bad postures of the schoolroom. The equipment costs very little. From two to four teams should be organized from each of the upper classes, and they might well have volley ball as a period of physical training in the regular school time at least once a week.

*Tether ball.*—Tether ball is another game that requires little space, is very vigorous, and can be played in almost any school yard. Directions for this game and for volley ball can be secured from the Spalding Athletic Library for 10 cents. Both sets of rules are in the same book. The lines around and bisecting the pole are best put in with brick.

*Skating.*—In the northern part of the country it is sometimes well to flood a part of the yard in winter for skating. All that is necessary in cold weather is to make a low embankment at the edge, so that the water will not run off, and to turn on the school hose.

## EQUIPMENT FOR GAMES.

When it is determined to have a play ground in a school yard, the first thing to be provided should be the apparatus for playing games. This should consist of about 1 dozen indoor baseballs, three or four volley balls, one or two basket balls, and half a dozen tether balls, ball

clubs, tennis nets, and tennis rackets for tether ball. All of this property is for common use and should be furnished by the school. If a boy brings his baseball to the school, he will get no more good out of it than the 17 other boys that play in the game with him. There is no reason why one boy should furnish such equipment to the school. The same argument applies with still more force to volley balls and basket balls. They are useless to the individual child, and they are awkward to carry from place to place. Adequate play in games such as these can not be had unless the school furnishes the necessary apparatus.

### EQUIPMENT FOR ATHLETICS.

School yards are not very well suited for athletics in general in most cases, but there are two or three things that can usually be provided with advantage. It is often possible to put in a straightaway 60-yard running track by the fence, so that it will take up very little room, and the children can practice whenever they please. The different dashes, 25, 50, and 60 yards, should be laid off permanently, and the school should provide a stop watch so that the children can be timed occasionally. There should be a jumping pit about 4 feet wide and 12 to 15 feet long, filled with soft sand to the depth of about 8 inches. The take-off board should be set in the ground flush with the surface. Standards should be furnished for the high jump also, as this is even better liked than the broad jump. The school carpenters are usually able to make very satisfactory standards. There should be one or two horizontal bars, which may be homemade or purchased outright. Horizontal bars are often installed in school yards without any provision to lessen the force of a fall. Such bars are very dangerous; one would not think of exercising in a gymnasium without a mat underneath. The earth should be excavated under each horizontal bar, and sand should be provided. The horizontal bar can be used for "chinning" and for many exercises in which the boys take pleasure.

### PLAYGROUND APPARATUS.

School authorities are apt to think that the equipment is the most important thing in making a playground. In matter of fact, it is the least important element of all. The thing of first importance is organization; next in importance is equipment for games; next comes provision for athletics; and last such apparatus as swings, slide, etc. It must not be thought from this that the play apparatus should be left out altogether. It is desirable in order to get the children to come to and stay on the playground, but its importance is easily overestimated.

*A.* PLAYGROUNDS IN GARY, IND.

*B.* PLAYGROUNDS IN GARY, IND.

*A.* WADING POOL.

*B.* CIRCLE BAR, GARY, IND.

A great many cities are now putting equipment into their school yards without consulting anyone of experience; and it must be said that the apparatus so purchased is often temporary in character, ugly in appearance, and dangerous in use. It is often set in the wrong places and sometimes costs two or three times as much as it should. Very much of this, although of recent installation, should be taken out at once and replaced by equipment that is safe and suited to the needs of the school. It must be remembered always that free play is more important than the best possible use of play equipment, such as swings, and the open spaces must not be destroyed for any kind of apparatus.

### THE SAND BIN.

The sand bin is the mother of the playground movement, and out of it have grown the other developments. From the time he is 1 year old until he is 10 or 12 the sand will furnish any child entertainment and delight. As the sand bin is for the little children, it should be placed in the most retired part of the yard, where it will be out of the way of the older children. It must have shade, or the sand will get too hot in the summer time. It is well to place it under or around a tree. It should have a molding board or seat around the edge, so that the children can mold the sand upon it. This is often used also as a seat when the teacher wishes to tell a story or to give instruction. The sand should be, if possible, the fine white sand of the seaside, as this is pleasant to work with and does not soil the clothes; but any building sand, such as that used in making plaster, will do. The carpenter of the school board can make the bin. The sand will gradually work out upon the playground, where it will often greatly improve the surface. As it is necessary for the sand to be renewed occasionally to keep it in a sanitary condition, this leakage is a good thing in any case. The sand bin does not require a bottom if the ground is level and hard.

The bin should be made either of cement or of 12-inch planks, with a molding board 8 or 10 inches wide around the edge. It should usually be painted the color of the ground, so that it may not be conspicuous.

### SEESAWS.

The seesaw is much used in the school yard, but not much can be said in its favor. The children who are using the seesaw are not getting either physical, intellectual, or social training. It is the frequent source of accidents and disputes. If a short seesaw board is placed on a high standard, it is very dangerous, because it then makes an acute angle when the child goes down to the ground. The long seesaw is safer than the short one, because the angle of the plank in its descent is not so great; but it must be remembered that there

will often be five or six children on each end of the seesaw, and there may be danger of it breaking if it is made long and not well strengthened. The principal danger is that the child who is down on the seesaw may slide off and let the other child down with a bang. I have known of half a dozen broken arms resulting in a week from a new set of poorly made seesaws. Another danger appears when the children stand up on the seesaw. One end comes down suddenly and the other child is thrown off on his head. The seesaw ought to have a handle. It should be made so it can be taken in at night and in the winter. It should be placed near the fence in some retired part of the yard. It is best to set it on a steel support anchored in concrete.

### THE SLIDE.

The slide is one of the most popular pieces of apparatus, and will be used almost continuously by a large number of children. There are apt to be disputes and quarrels over the swing, but the slide offers a natural rotation in office. Sliding represents a universal interest of children, for they have slid down banisters and cellar doors from time immemorial. Almost every place that offers a natural incline in the cities will be found to be used by them. People generally have the idea that the slide is dangerous on account of its height, but in an experience of 13 years I have never known of a single serious accident from the slide, except from slivers in the early days when slides were made of pine. Railings at the top prevent the children from falling off there, and after they sit down on the slide they can not well fall unless they try to. There is a general feeling also that the slide is very hard on clothes. I doubt if this is so, if the slide is in good condition. The amount of the friction and wear of course depends on the smoothness. Even in the schoolroom the child wriggles around constantly in his seat, and the seat or the cushion is not usually very smooth. The children tend to run up the slide if they are not watched at first, and also to slide down standing up. If a slide is scratched and marked with nails, it is much more destructive of clothes. The crucial thing about it is the condition of the incline itself. In the early days these slides were often made of pine. The pine could be made very smooth and safe, but after a rain the grain was likely to come up so that a child might be impaled on the slivers as he slid down. Most of the machine companies now make a steel slide. This is well galvanized, but the galvanizing is apt to wear through where the children place their feet, causing the metal to rust. A rusty slide both soils and wears the clothes very rapidly. The steel slide is too cold in winter and too hot in summer for much comfort. It is also too expensive to be generally purchased. W. S. Tothill, of Chicago, makes a maple slide that answers all requirements

very well. It does not rust or splinter. It is not too hot nor too cold; it sometimes warps, but never seriously. The 9-foot slide is sold by Marshall Field & Co. for $15; the 15-foot slide for $30. The slide needs to be waxed occasionally or dressed with raw linseed oil. It is well to have a carpet mat or two to sit on after rains or after oiling, and it is desirable that the apparatus should be made so that the sliding board is detachable, allowing it to be turned over or taken in so as to protect it from the rain. It is difficult to take the slide in at night, and a board may be chained in the slide or a chain may be put around it to prevent its use at night.

#### SWINGS.

The swing is probably the commonest piece of apparatus for the play of small children everywhere. It is also one of the most dangerous, and, as generally made, one of the most unsightly. It probably causes more quarrels than any other one piece of apparatus and more criticism from its use at night than anything else about the playground. In unfenced school grounds the swings should be made so that they can be taken down or chained at night. It is best as a rule to make the swing frame of 3-inch gas pipe, if threaded; or of 2-inch uprights and 3-inch horizontals, if unthreaded. Two-inch galvanized pipe will cost about 16 cents a foot, and the 3-inch pipe about 32 cents a foot. Black pipe will cost about two-thirds as much. The swing should be well braced and set in concrete about 3½ or 4 feet deep. The swings for a school yard should not be over 8 or 10 feet high. The tall swing takes up too much room, is preempted by the large children, and is too dangerous. The swings should be placed in the most retired corner of the yard and parallel with the fence, where children will not be struck by them. People are apt to fear that the children will be hurt by falling out of the swing. This rarely happens. The real danger is to the child who is running by. If two children are standing up in a swing and swinging hard and another child runs by and is struck in the side of the head, he will certainly be seriously injured and may be killed. In some places the swings are fenced off so as to prevent this. A piece of rubber hose is sometimes nailed to the side of the swing board so as to deaden the blow if a child is struck. For the school yard it is best to have as light a swing as possible, because its momentum is not so great in that case, and it is easier to put out and take in. A wooden board and ropes are to be preferred to an iron seat and chains or links. The steel hook that supports the swing is a crucial point, as it is apt to wear through. It should be made of hardened steel and should wear on a steel thimble around which the rope is spliced. Girls should not be allowed to stand up in swings, as their dresses tend to fly up. Boys should not be allowed

to swing girls for still more obvious reasons. It is best for children to swing themselves in any case, as that is the only way they can get any exercise out of it. The pipe fittings can be purchased of any of the machine companies. The pipe can be secured of local dealers, and all should be erected by local men. The swings can also be made satisfactorily by any ingenious carpenter. The pipe should either be galvanized or painted green. The concrete blocks should be 16 to 18 inches square. There should be about 20 swings in the yard of a good-sized city school.

### THE GIANT STRIDE.

The giant stride is often put into school yards. It is always enjoyed by the children and has some value as exercise. It is a rather expensive piece of apparatus, however, and the steel ladders are rather dangerous. For the school yard I prefer the rope and wood ladder with wooden rungs. This is lighter and does not bruise where it strikes. It is also much easier to take in the ropes when that is desired. The giant stride should be placed in the corner of the yard, if possible, so that it may be out of the way of the games and that the children upon the ground may not be struck by those who are flying around upon it.

### THE SCHOOL MENAGERIE.

Children are nearly always fond of animals. It is they who are the chief patrons of the zoological gardens everywhere. The opportunity to see the pigs and the cows and the chickens constitutes one of the chief charms to them of the trip to the country. It would be well if there were animals to feed and watch in every school yard. It would be still more delightful if rabbits and squirrels could run about on the playgrounds among the children and not be harmed. There is a "coon tree" in the yard of the Emerson School, at Gary, Ind. There is a house at the foot of the tree into which the raccoons may descend and where the children may go to make their acquaintance. In the yard of the Froebel School there is a large fountain that will be stocked with fish. It would be well to put bird and squirrel boxes in the trees and to encourage the children to feed the birds and squirrels if the attitude of the children makes this practicable.

### CONSTRUCTION OR PURCHASE OF EQUIPMENT.

A school playground may be satisfactorily equipped for $200, if most of the equipment is made and set up by local men. The slide can probably be purchased as cheaply as it can be made. Other pieces of apparatus will cost considerably more from the machine companies.

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